

CLAIMS

1. A signal processing apparatus operated by a remote controller comprising:

5 a designation unit arranged to designate reproduction procedure of an image signal recorded on a recording medium;

a management data processing unit arranged to allocate to an operating key of said remote controller, a reproduction function that corresponds  
10 to said designated reproduction procedure, and generate reproduction procedure management information which includes operating key information indicating the operating key to which said reproduction function is allocated, and reproduction  
15 procedure information indicating said designated reproduction procedure; and

a recording unit arranged to record on said recording medium the reproduction procedure management information.

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2. A signal processing apparatus according to claim 1, wherein said management data processing unit selects one of a plurality of layout informations representing predetermined display layouts, and  
25 generates said reproduction procedure information using the selected layout information.

3. A signal processing apparatus according to claim 2, wherein said a plurality of layout informations further include template information representing types of operating keys to be employed  
5 and functions of said operating keys; and wherein said management data processing unit further generates said operating key information based on the template information included in said selected layout data.

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4. A signal processing apparatus according to claim 2, wherein said management data processing unit selects said layout data based on the number of pictures of said image signal to be displayed on a  
15 same picture that is selected by said designation unit from among the image signals of the plurality of pictures.

5. A signal processing apparatus according to  
20 claim 1, wherein said management data processing unit further generates registered image management data for identifying image data designated through said reproduction procedure, and wherein said recording unit writes onto said recording medium said  
25 registered image management data.

6. A signal processing apparatus according to

claim 1, further comprising:

a reproduction unit arranged to reproduce said  
image signal and said reproduction procedure  
management information stored on said recording  
5 medium; and

a control unit arranged to control the  
reproduction operation of said reproduction unit  
based on said reproduction procedure management  
information that is reproduced by said reproduction  
10 unit.

7. A signal processing apparatus according to  
claim 6, further comprising:

a reception unit arranged to receive a  
15 television broadcast; and

an output unit arranged to output, to a display  
device, an image signal associated with said  
television broadcast received by said reception unit  
and an image signal reproduced by said reproduction  
20 unit.

8. A signal processing apparatus according to  
claim 7, wherein said reproduction unit includes a  
memory unit having a plurality of memory planes, and  
25 wherein, based on said reproduction procedure  
designated in accordance with said reproduction  
procedure management information, said control unit

determines the memory plane to which said image signal is to be written.

9. A signal processing apparatus according to  
5 claim 8, wherein said reproduction unit further includes a mixing circuit which mixes image data stored in said plurality of memory planes and outputs the mixed image data to said display device, and wherein, based on said reproduction procedure, said  
10 control unit changes the ratio at which said mixing circuit mixes said image data of said memory planes.

10. A signal processing apparatus according to claim 8, further comprising:  
15 an output unit arranged to output, to said display device, an image signal reproduced in accordance with said reproduction procedure,  
wherein said control unit detects a display resolution and the number of display colors  
20 designated by said reproduction procedure, and compares the detected display resolution and number of display colors with the display resolution and the number of display colors of said display device to determine to which memory plane said image signal is  
25 to be written.

11. A signal processing apparatus, the

operation of which is controlled by a remote controller, comprising:

5 a designation unit for designating reproduction procedure of an image signal stored on a recording medium;

a management data processing unit arranged to allocate to an operating key of said remote controller a reproduction function corresponding to said designated reproduction procedure, and generate  
10 reproduction procedure management information which includes operating key information indicating the operating key to which said reproduction function is allocated, and reproduction procedure information, which indicates said designated reproduction  
15 procedure; and

a transmission unit arranged to transmit said reproduction procedure management information to an external device.

20 12. A signal processing apparatus comprising:

a designation unit arranged to designate, in accordance with an instruction from an operating key of an operating unit, reproduction procedure of an image signal recorded on a recording medium;

25 a management data processing unit arranged to allocate to the operating key of said operating unit a reproduction function corresponding to said

designated reproduction procedure, and generate reproduction procedure management information, which include operating key information indicating the operating key to which said reproduction function is  
5 allocated, and reproduction procedure information which indicates said designated reproduction procedure; and

a recording unit arranged to record to said recording medium said reproduction procedure  
10 management information.

13. A signal processing apparatus comprising:  
a designation unit arranged to designate in accordance with an instruction from an operating key  
15 of an operating unit, reproduction procedure of an image signal stored on a recording medium;

a management data processing unit arranged to allocate to the operating key of said operating unit a reproduction function corresponding to said  
20 designated reproduction procedure, and generate reproduction procedure management information, which includes operating key information indicating the operating key to which said reproduction function is allocated, and reproduction procedure information,  
25 which indicates said designated reproduction procedure; and

a transmission unit arranged to transmit said

reproduction procedure management information to an external device.

14. A television broadcast receiver, the  
5 operation of which is controlled by a remote controller, comprising:

a designation unit arranged to designate reproduction procedure of an image signal stored on a recording medium;

10 a management data processing unit arranged to allocate to the operating key of said remote controller a reproduction function corresponding to said designated reproduction procedure, and generate reproduction procedure management information, which  
15 includes operating key information indicating the operating key to which said reproduction function is allocated, and reproduction procedure information which indicates said designated reproduction procedure;

20 a recording unit arranged to write onto said recording medium said reproduction procedure management information;

a reproduction unit arranged to reproduce the image signal and said reproduction procedure  
25 management information stored on said recording medium;

a reception unit arranged to receive a

television broadcast signal that includes moving image data and still image data;

a display image generation unit which includes a memory unit that has a moving image memory plane  
5 for moving image data and a still image memory plane for still image data, arranged to generate an image signal for display using said memory unit and output said image signal to a display device;

a mode switching unit arranged to switch  
10 between a first mode for displaying, on said display device, images associated with a television broadcast received by said reception unit, and a second mode for displaying, on said display device, an image associated with the image signal that is reproduced  
15 from said recording medium by said reproduction unit in accordance with said reproduction procedure management information; and

a writing control unit arranged to write, in said first mode, said moving image data included in  
20 said television broadcast signal onto said moving image memory plane and also write said still image data onto said still image memory plane, and write, in said second mode, the reproduced image signals of a plurality of pictures to both said moving image  
25 memory plane and said still image memory plane.

15. A television broadcast signal receiving



apparatus comprising:

a reproduction unit arranged to reproduce, from  
a recording medium, a still image signal and  
reproduction procedure management information  
5 indicating reproduction procedure of said still image  
signal;

a reception unit arranged to receive a  
television broadcast signal that includes moving  
image data and still image data;

10 a display image generation unit, which includes  
a memory unit that has a moving image memory plane  
for moving image data and a still image memory plane  
for still image data, arranged to generate an image  
signal for display using said memory unit and output  
15 said image signal to a display device;

a mode switching unit arranged to switch  
between a first mode for displaying, on said display  
device, an image associated with a television  
broadcast received by said reception unit, and a  
20 second mode for displaying, on said display device,  
an image associated with the image signal that is  
reproduced from said recording medium by said  
reproduction unit in accordance with said  
reproduction procedure management information; and

25 a writing control unit arranged to write, in  
said first mode, said moving image data included in  
the television broadcast signal onto said moving

image memory plane and also write said still image data onto said still image memory plane, and write, in said second mode, the reproduced still image signal of a plurality of pictures to both said moving  
5 image memory plane and said still image memory plane.

16. A signal processing method performed by a remote controller comprising the steps of:

designating reproduction procedure of an image  
10 signal recorded on a recording medium;

allocating to an operating key of said remote controller, a reproduction function that corresponds to said designated reproduction procedure, and generating reproduction procedure management  
15 information which includes operating key information indicating the operating key to which said reproduction function is allocated, and reproduction procedure information indicating said designated reproduction procedure; and

20 the recording on said recording medium the reproduction procedure management information.

17. A signal processing method performed by a remote controller comprising the steps of:

25 designating reproduction procedure of an image signal stored on a recording medium;

allocating to an operating key of said remote

controller a reproduction function corresponding to  
said designated reproduction procedure, and  
generating reproduction procedure management  
information which includes operating key information  
5 indicating the operating key to which said  
reproduction function is allocated, and reproduction  
procedure information which indicates said designated  
reproduction procedure; and  
transmitting said reproduction procedure  
10 management information to an external device.

18. A signal processing method comprising the  
steps of:

designating, in accordance with an instruction  
15 from an operating key of an operating unit,  
reproduction procedure of an image signal recorded on  
a recording medium;

allocating to the operating key of said  
operating unit a reproduction function corresponding  
20 to said designated reproduction procedure, and  
generating reproduction procedure management  
information which includes operating key information  
indicating the operating key to which said  
reproduction function is allocated, and reproduction  
25 procedure information which indicates said designated  
reproduction procedure; and

recording to said recording medium said

reproduction procedure management information.

19. A signal processing method comprising the steps of:

5       designating, in accordance with an instruction from an operating key of an operating unit, reproduction procedure of an image signal stored on a recording medium;

          allocating to the operating key of said  
10   operating unit a reproduction function corresponding to said designated reproduction procedure, and generating reproduction procedure management information which includes operating key information indicating the operating key to which said  
15   reproduction function is allocated, and reproduction procedure information, which indicates said designated reproduction procedure; and

          transmitting said reproduction procedure management information to an external device.

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